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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,341	07/03/2001	David A. Jones	659/866	2473

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EXAMINER

CHIN, PETER

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/898,341	JONES ET AL.	
	Examiner Peter Chin	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 18 March 2003.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-22 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

### **DETAILED ACTION**

**In view of Applicant's arguments made in the Brief, filed March 18, 2003, The Finality of the Office Action, Paper No. 6 is hereby withdrawn and the following action taken:**

1. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voigtman et al (2,996,424) or Donnelly (3,014,832) taken in view of Osberg (2,785,067), admitted state of prior art as stated on pages 1,2 and 5 of the instant specification and Ampulski et al (5,246545) or Wendt et al (5,730,839).

Voigtman et al discloses the application of a release agent onto tissue paper web to penetrate through to the surface of the web facing the drier surface prior to creping the tissue web from the drier surface, column 5, lines 36-46. The release agent is used in the form of a water dispersion or emulsion, column 4, lines 31-38. Ketene dimer is disclosed as a suitable release agent and is used by example in Examples I and II. It is applied as an aqueous emulsion. Other agents disclosed are certain surfactants including "rewetting" agents, silicone emulsions, mineral oil and fatty acid emulsions. The amount of release agent applied to the web varies from 0.5 to 50 pounds/ton tissue web, column 7, lines 19-33. The release agent may be selected to impart characteristics or properties of the release agent to the tissue web and these include absorbency and softness. Multiply product is disclosed in column 1, lines 38-71.

Donnelly is similar to Voigtman et al in that a release agent is applied to the tissue web prior to creping from the drier surface, last paragraph of column 5. A water dispersion of release agent is contemplated, column 4, lines 31-38. Ketene dimer is a

suitable release agent as well as others of the type disclosed in Voigtman et al, column 5, lines 10-22. It is applied at a rate of between 0.001 and 25 pounds/ton of tissue web. The release agent selected may be selected to impart the characteristic or property of the release agent, column 1, lines 63-66 and column 5, lines 57-59. It is noteworthy that Donnelly teaches the incorporation of an additional component to enhance the property of the tissue web, a cationic softener to a mineral oil (release agent) and water emulsion, Example 1, column 8.

Both references are silent as to the joint use of a surfactant with ketene dimer. Since both references teach a water dispersion or emulsion of the release agent and Donnelly further teaches that it is advantageous to employ additional component to enhance properties of the tissue, it would have been obvious to use a surfactant to create an aqueous dispersion of ketene dimer. It is also conventional practice in the art when making aqueous dispersion or emulsion of ketene dimers as evidenced by Osberg. And as noted by Ampulski et al in column 11, lines 18-23, papermaking additive that is emulsified using a surfactant emulsifier has the advantage having the dispersion agitated to prevent or inhibit separation of the additive and water phase. Moreover, in view of the fact that Donnelly further teaches additional components to improve the properties of the tissue, it would have been especially obvious to use a surfactant that not only emulsifies the ketene dimer but also enhances absorbency and softness. In as much as ketene dimer is normally a hydrophobic sizing agent, which reduces the wettability as further evidenced by pages 1 and 2 of the instant specification, it would be especially obvious to select a surfactant that would enhance

absorbency or wettability of the tissue paper to offset loss created by the presence of the ketene dimer.

Offsetting the adverse effect on wettability of tissue paper by hydrophobic softeners such as polysiloxane in tissue paper with the addition of a surfactant is recognized by Ampulski et al. Thus, there is additional motivation to one of ordinary skill in the art to employ a surfactant in amount not only to emulsify the ketene dimer but also to improve the wettability. The claimed absorbency rate or wettability of claims 9 and the degree of sizing, i.e., lack thereof, of claim 17 would have an obvious matter of optimization of the degree of wettability controlled by the amount of surfactant and ketene dimer used in the manner suggested by Ampulski et al and Donnelly or Voigtman et al.

In regard to claims 4-8, Wendt et al evidences the fact that multilayer tissue products having a layer of hardwood and another layer of softwood fibers are conventional in the art and in as much as both Voigtman et al and Donnelly contemplate multiply hence multilayer products it would have been obvious to employ separate layers of hardwood, and softwood fibers which corresponds to the claimed "short" fibers and "long" fibers, respectively, in Voigtman et al or Donnelly. Note that Wendt et al shows that it is also well known to have more than two layers, column 5, lines 10-44.

In regard to claims 18 and 20, for the purposes of this rejection, it is assumed that the ketene dimer and surfactant is added to the web of fibers in view of the fact that claim 20 which depends from claim 18 in contrast to that claim which adds the ketene

dimmer prior to removal of the water, confusingly claims the addition of ketene dimer to the fibers after the water has been removed from the aqueous suspension of fibers.

2. Claims 18-20 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,027,611. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are open to multi-suspension headbox for making the absorbent paper.

3. Claims 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 appears to be redundant since claim 18 appears to already claim ketene dimer addition before dewatering. Claim 20 appears to be in conflict with claim 18 from which it depends from since it claims that the ketene dimer is added after dewatering.

4. It is urged that unexpected results are obtained by the present invention. It would be expected that ketene dimer by itself would lower the wettability of the paper in view of the fact that it is conventionally used as sizing agent and is hydrophobic substance. Since the prior art as represented by Voigtman et al and Donnelly do indeed add ketene dimer, albeit as a release agent and in the same amount as the present invention, to the tissue paper, one of ordinary skill in the art would readily expect that wettability would be reduced. Indeed, Donnelly teaches addition of other components to enhance the properties of the paper. Ampulski et al recognizes the need to offset reduced wettability

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caused by the presence of hydrophobic softeners such as polysiloxane by using an additional component, a surfactant to resolve this problem. Therefore, the alleged unexpected results are in actuality, expected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Chin whose telephone number is (703) 308-2046. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

Peter Chin  
Primary Examiner  
Art Unit 1731